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PATENT
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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of:)
Joo Soo LIM et al.) Confirmation No.: 2174
)
Application No.: 09/840,082) Group Art Unit: 2871
)
Filed: April 24, 2001) Examiner: Qi, Zhi Qiang
)
For: Liquid Crystal Display Device and)
Fabricating Method Thereof) **Mail Stop Appeal Brief Patents**

Commissioner for Patents
Mail Stop Appeal Brief Patents
Alexandria, VA 22314

Sir:

APPELLANTS' REPLY BRIEF UNDER 37 C.F.R. § 41.41

Appellants filed a Notice of Appeal in the above-identified patent application on July 7, 2005. Appellant filed an Appellants' Brief on October 7, 2005. This Reply Brief responds to the arguments raised in the Examiner's Answer mailed December 13, 2005. This Reply Brief is timely filed within the period for response which extends through February 13, 2005.

Appellants respectfully maintain that the rejections under 35 U.S.C. § 103 are improper and should be reversed for the reasons set forth in the Appellants Brief filed October 7, 2005. Specifically, Appellants respectfully assert that the applied art does not teach or suggest a combination including a light shielding member that covers the claimed metal thin film (for example, a drain electrode in claims 1, 9, 11, and 19 or an upper electrode of a charging device in claims 5, 9, 15, and 19) to block light incident on the claimed metal thin film. In the prior art, as shown for example in the Applicants' Admitted Prior Art (AAPA), a black matrix is

conventionally formed in a matrix corresponding to data lines and gate lines while also covering the transistor of each pixel area. In particular, the black matrix is formed over the data lines and gate lines to separate adjacent pixels by preventing light from one pixel being transmitted into an adjacent pixel area, thereby preventing cross-talk. The black matrix is further formed over the transistor because the transistor includes semiconductor layers having electrical conductivity characteristics that are sensitive to light. Other metal layers are conventionally left uncovered by the black matrix. Unlike the prior art, the inventors of the present invention have recognized and solved problems associated with contrast in liquid crystal displays in high ambient light applications, such as aircraft control panels, as described in the present specification, for example, at paragraphs [0008] and [0031]. Specifically, the inventors of the present invention have found that the light shielding member may be extended to cover metal elements, such as a metal drain electrode, thereby preventing reflection.

The Examiner's Answer asserts that *Murade* would motivate one of ordinary skill in the art to modify the structure of AAPA to include this feature, and therefore, achieve the claimed invention. Appellants respectfully disagree. As set forth in the Appellants' Brief filed October 7, 2005, *Murade* only teaches the importance to cover semiconductor/polysilicon elements. Here, Appellants respectfully note that light readily affects the electrical conductivity properties of a semiconductor/polysilicon material, thereby leading to undesired electrical characteristics, such as leakage current. As a result, light incident on the semiconductor/polysilicon elements should be prevented, which is the concern of *Murade*. In contrast, light would not readily affect the electrical conductivity properties of a metal. The only metal elements discussed by the Examiner's Reply are the data line and the gate line in *Murade*. However, Appellants respectfully assert that that a gate line or a data line does not correspond to

and cannot be compared to the claimed metal thin film elements. Moreover, as discussed above, the gate line and the data line are conventionally covered by the black matrix. Therefore, Appellants respectfully assert that *Murade* would provide no motivation to one of ordinary skill in the art to extend a light shielding member to cover the claimed metal thin film elements, as claimed, but only to cover semiconductor/polysilicon elements.

Unlike *Murade*, the present invention solves problems associated with contrast in liquid crystal displays in high ambient light applications, such as aircraft control panels, as described in the present specification, for example, at paragraphs [0008] and [0031]. Specifically, the inventors of the present invention have found that metal elements, such as a metal drain electrode, should be covered to prevent reflection.

MPEP § 2143.01 instructs that “[o]bviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art.”

MPEP § 2143.01 also instructs that “[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).”

(Emphasis in original.) Thus, Appellants respectfully assert that the rejection of independent claims 1, 5, 9, 15, and 19, which recite similar features, is improper and should be reversed.

Appellants respectfully assert that dependent claims 2-3, 6-7, 12-13, 16-17, and 20 are allowable at least because of their respective dependencies from independent claims 1, 5, 9, 11, 15, and 19, and for the reasons set forth above. Thus, the rejection of dependent claims 2-3, 6-7, 12-13, 16-17, and 20 are improper and should be reversed.

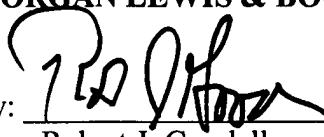
In view of the foregoing and the previously filed Appellants' Appeal Brief, Appellants respectfully request the reversal of the Examiner's rejections and allowance of all the pending claims. If there are any other fees due in connection with the filing of this Reply Brief, please charge the fees to our Deposit Account No. 50-0310.

Respectfully submitted,

MORGAN LEWIS & BOCKIUS LLP

Dated: February 13, 2006

By:



Robert J. Goodell

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